

What is Claimed is

1. A DNA which codes for a polypeptide with interferon activity.
2. A cloned DNA showing complementarity to human interferon messenger RNA.
3. The cloned DNA according to claim 2, wherein the messenger RNA is human fibroblast interferon messenger RNA.
4. A cloned DNA which codes for human interferon polypeptide.
5. The cloned DNA according to claim 4, wherein the polypeptide is human fibroblast interferon polypeptide.
6. A recombinant plasmid wherein a DNA showing complementarity to human interferon messenger RNA is inserted in a vector DNA. ✓
7. The recombinant plasmid according to claim 6, wherein the messenger RNA is human fibroblast interferon messenger RNA.
8. The recombinant plasmid according to claims 6 or 7, wherein the plasmid is an Escherichia coli plasmid.
9. The recombinant plasmid according to claim 8, wherein the plasmid is selected from pBR322, pCR1, pMB9 and pSC1.
10. The recombinant plasmid TpIF 319-13.
11. A microorganism containing the recombinant plasmid defined in claim 10. <sup>30</sup>
12. A microorganism containing the recombinant plasmid defined in claim 11. <sup>30</sup>
13. The microorganism according to claim 11 which is Escherichia coli X1776. <sup>20</sup>

<sup>11</sup>  
14. The microorganism according to claim <sup>12</sup>12 which is Escherichia coli  $\chi$ 1776.

<sup>8</sup>  
15. Escherichia coli  $\chi$ 1776/TpIF 319-13 ATCC 31712.

16. A process for producing a DNA which codes for a polypeptide with interferon activity by recombinant DNA technology.

17. The process according to claim 16, wherein the polypeptide is the human fibroblast interferon polypeptide.

18. A process for producing a DNA which codes for a polypeptide with interferon activity by using human interferon messenger RNA as a template.

19. The process according to claim 18, wherein the DNA is a cloned DNA showing complementarity to human interferon messenger RNA.

20. The process according to claim 19, wherein the messenger RNA is human fibroblast interferon messenger RNA.

21. A process for producing a recombinant plasmid, which comprises inserting a DNA showing complementarity to human interferon messenger RNA in a vector DNA.

22. The process according to claim 21, wherein the messenger RNA is human fibroblast interferon messenger RNA.

23. The process according to claim 21 or 22, wherein the vector DNA is an Escherichia coli plasmid.

24. The process according to claim 23, wherein the plasmid is selected from pBR322, pCR1, pMB9 and pSC1.

25. The process according to claim 21, wherein the recombinant plasmid is TpIF 319-13.

26. A process for producing a microorganism containing a recombinant plasmid defined in claim 21 or 22, which comprises transforming a microorganism with the said

2

recombinant plasmid in a conventional manner.

27. The process according to claim 26, wherein the microorganism is Escherichia coli X1776.

28. The process according to claim 26, wherein the recombinant plasmid is TpIF 319-13.

29. The process according to claim 26, wherein the microorganism containing a recombinant plasmid is Escherichia coli X1776 TpIF 319-13 ATCC 31712.

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